

We claim:

1. A golf club head, comprising:
a forward striking face; and
a rearward surface, opposite the forward striking face;
wherein the forward striking face is configured to include an engineered
5 texture having a recessed surface and a prescribed, regular pattern of discrete, geometric
shapes projecting forward from the recessed surface, wherein the geometric shapes are
spaced apart from each other by at least 0.1 mm and each geometric shape has a volume of
less than 0.0007 mm³;
and wherein the engineered texture enhances the performance of the golf club
10 head upon striking a golf ball, providing one or more of an increased backspin, a lower
launch angle, and a higher ball speed, as compared to a golf club head having a striking face
lacking such an engineered texture.
2. The golf club head of claim 1, wherein the pattern of geometric shapes
has a total volume of less than 0.02 mm³, measured over a reference region in the forward
striking face having a size of 2.5 mm by 2.5 mm.
3. The golf club head of claim 1, wherein the pattern of geometric shapes
has a total volume, measured over a reference region in the forward striking face having a
size of 2.5 mm by 2.5 mm, that is less than 25% of a volume over an equivalent portion of a
golf club head having a striking face lacking such an engineered texture.
4. The golf club head of claim 1, wherein the pattern of geometric shapes
has a total volume, measured over a reference region in the forward striking face having a
size of 2.5 mm by 2.5 mm, that is less than 15% of a volume over an equivalent portion of a
golf club head having a striking face lacking such an engineered texture.
5. The golf club head of claim 1, wherein each of the geometric shapes
has a volume of less than 0.0003 mm³.
6. The golf club head of claim 1, wherein the geometric shapes all have
the same shape and size.

7. The golf club head of claim 1, and further comprising a plurality of grooves formed in the forward striking face.

8. A method of manufacturing a golf club head, comprising:
providing a substantially flat metal plate having opposing first and second surfaces spaced apart from each other by a first thickness, the first surface forming a forward striking face of the golf club head; and

5 treating the first surface of the flat metal plate, to form an engineered texture having a recessed surface and a prescribed, regular pattern of discrete geometric shapes projecting forward from the recessed surface, wherein the geometric shapes are spaced apart from each other by at least 0.1 mm and each geometric shape has a volume of less than 0.0007 mm³;

10 wherein the engineered texture enhances the performance of the golf club head upon striking a golf ball, providing one or more of an increased backspin, a lower launch angle, and a higher ball speed, as compared to a golf club head having a forward striking face lacking such an engineered texture.

9. The method of manufacturing of claim 8, wherein treating the first surface comprises chemical etching.

10. The method of manufacturing of claim 8, wherein treating the first surface comprises precision saw-cutting.

11. The method of manufacturing of claim 8, wherein treating the first surface comprises laser cutting.

12. The method of manufacturing of claim 8, and further comprising initially cutting or stamping a metal sheet to produce the flat metal plate, wherein the flat metal plate has a prescribed face shape.

13. The method of manufacturing of claim 8, and further comprising initially integrally casting a body that includes the flat metal plate.

14. The method of manufacturing of claim 8, wherein treating the first surface to form the engineered texture forms the prescribed, regular pattern across the entirety of the first surface.

15. The method of manufacturing of claim 8, wherein the geometric shapes that are part of the engineered texture formed in the step of treating the first surface are all identical to each other and square in plan shape.

16. The method of manufacturing of claim 8, wherein the geometric shapes of the engineered texture formed in the step of treating the first surface are all identical to each other and diamond in plan shape.

17. The method of manufacturing of claim 8, wherein the geometric shapes of the engineered texture formed in the step of treating the first surface each include a first portion having a depth of at least 0.012 mm and a second portion having a depth of at least 0.006 mm.

18. A golf club head, comprising:

a body having a top portion, a toe portion, a heel portion, and a sole portion;

and

a front wall having a forward striking face and a rearward surface, the forward striking face configured to include a recessed surface and an engineered texture having a prescribed pattern of discrete, geometric shapes projecting forward from the recessed surface, wherein the geometric shapes are spaced apart from each other by at least 0.1 mm and each geometric shape has an area on the forward striking face that is less than 0.05 mm²;

wherein the engineered texture enhances the performance of the golf club head upon striking a golf ball, providing one or more of an increased backspin, a lower launch angle, and a higher ball speed, as compared to a golf club head having a forward striking face lacking such an engineered texture.

19. The golf club head of claim 18, wherein the front wall further comprises a plurality of grooves forming scorelines in the forward striking face.

20. The golf club head of claim 18, wherein:
the top portion, toe portion, heel portion, and sole portion of the body define a front opening; and
the front wall is welded to the front opening of the body.

21. The golf club head of claim 18, wherein the front wall and at least the sole portion of the body are integrally formed with each other.

22. The golf club head of claim 18, wherein the golf club head is an iron-type head having a loft of at least 18 °.

23. The golf club head of claim 18, wherein the golf club head is an iron-type head having a loft of at least 45 °.

24. The golf club head of claim 18, wherein the body and the front wall together form a hollow head having a loft less than about 25 °.

25. The golf club head of claim 18, wherein the engineered texture comprises a prescribed pattern of a first plurality of shapes and a second plurality of shapes, the first plurality of shapes being positioned adjacent to the second plurality of shapes.

26. The golf club head of claim 18, wherein the geometric shapes all have the same shape and size.

27. The golf club head of claim 26, wherein the geometric shapes have more than one orientation.